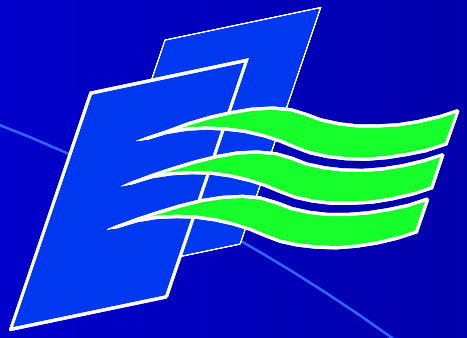

Auratek Security Inc.

Recent Development in Portable Sensor

Presented by: André Gagnon P. Eng.

NDIA 19th Annual Security Division, Session VIII, Group II

Symposium & Exhibition

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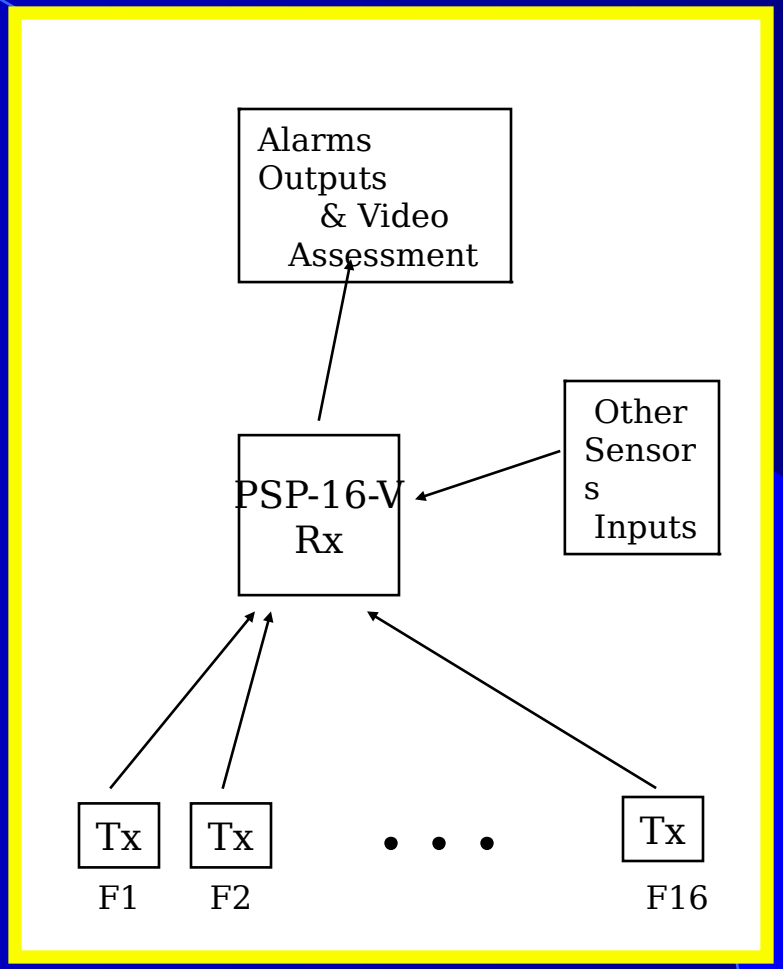
PSP-16-V Working Principles

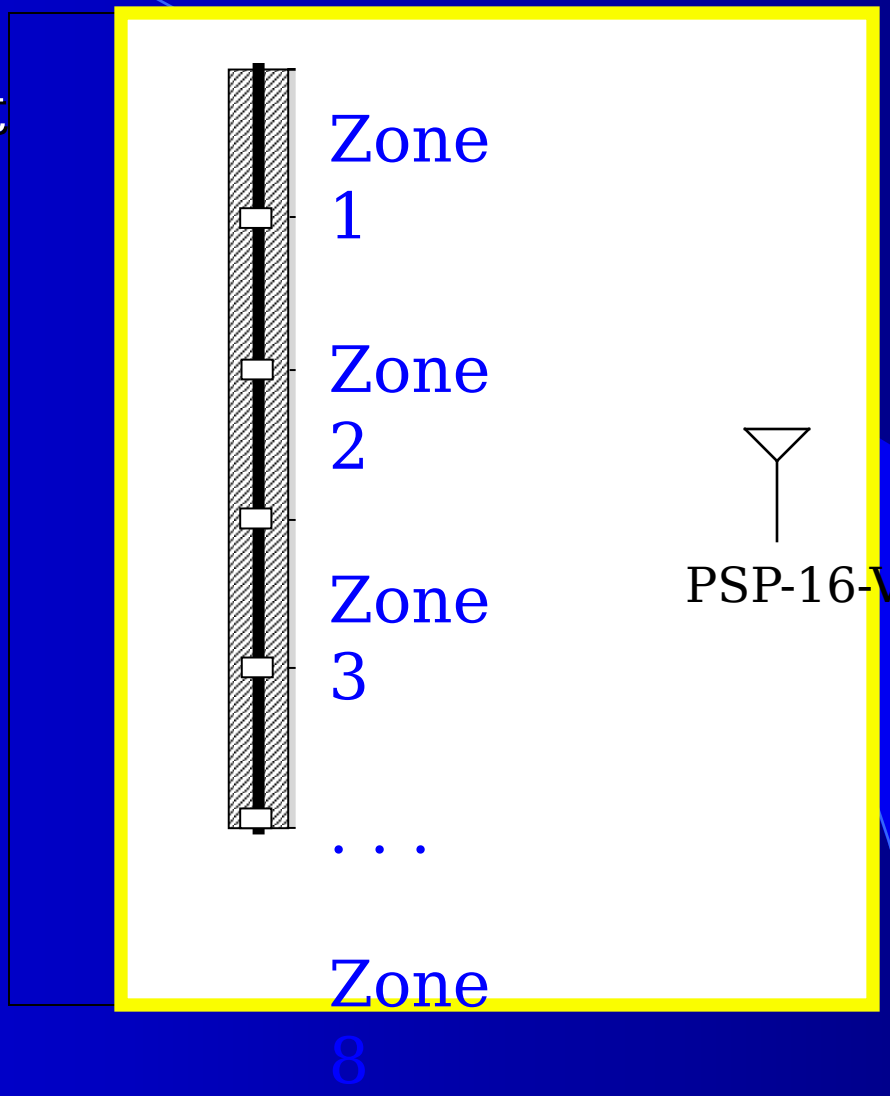
Each PSP-16-V:

- Receives 16 Tx (RF sensors).
- Based on cellular concept.
- Each zone is frequency coded.
- Transmit alarms via RF.
- 32 PSP-16-V can be grouped into one master PC.



Ex 1: Transmitting into sections of sensor cables

- Each sensor cable section forms a distinct zone.
- One dual frequency transmitter per zone.
- 8 zones per system.
- Receive via one single antenna remotely placed.



Ex 1a: Sensor cable crossing a ditch

Ex 1b: Making the Concertina Wire the sensing element

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Ex 1b: Making the Concertina Wire the sensing element

- The sensor cable is mounted inside the concertina wire along the center axial and held in place by a non-metallic suspender.
- A detection field of 3ft (1 m) surrounds the concertina wire.
- Transmitters are mounted inside the concertina wire.
- 30 m per zone.
- More tolerable to high wind. No alarm for up to 2 inches of lateral displacement. Alarms when deformed by more than 6 inches.

Ex 1c: Sensor cable deployed on pavement

Ex 1d: The dual frequency transmitter

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Ex 1e: The PSP-16-V

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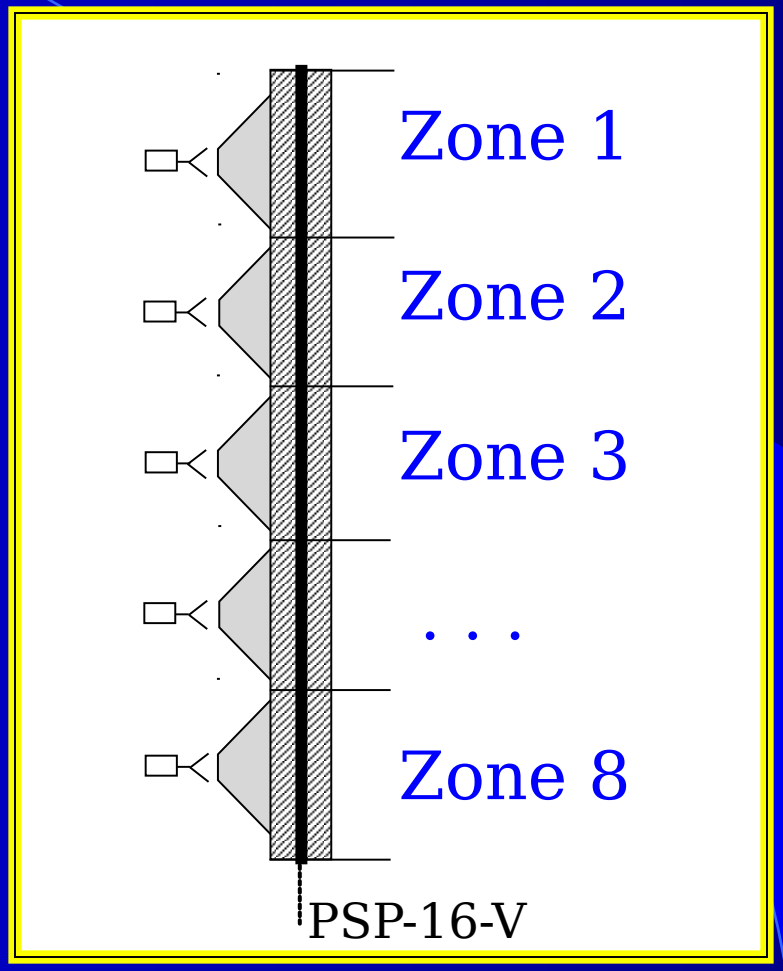
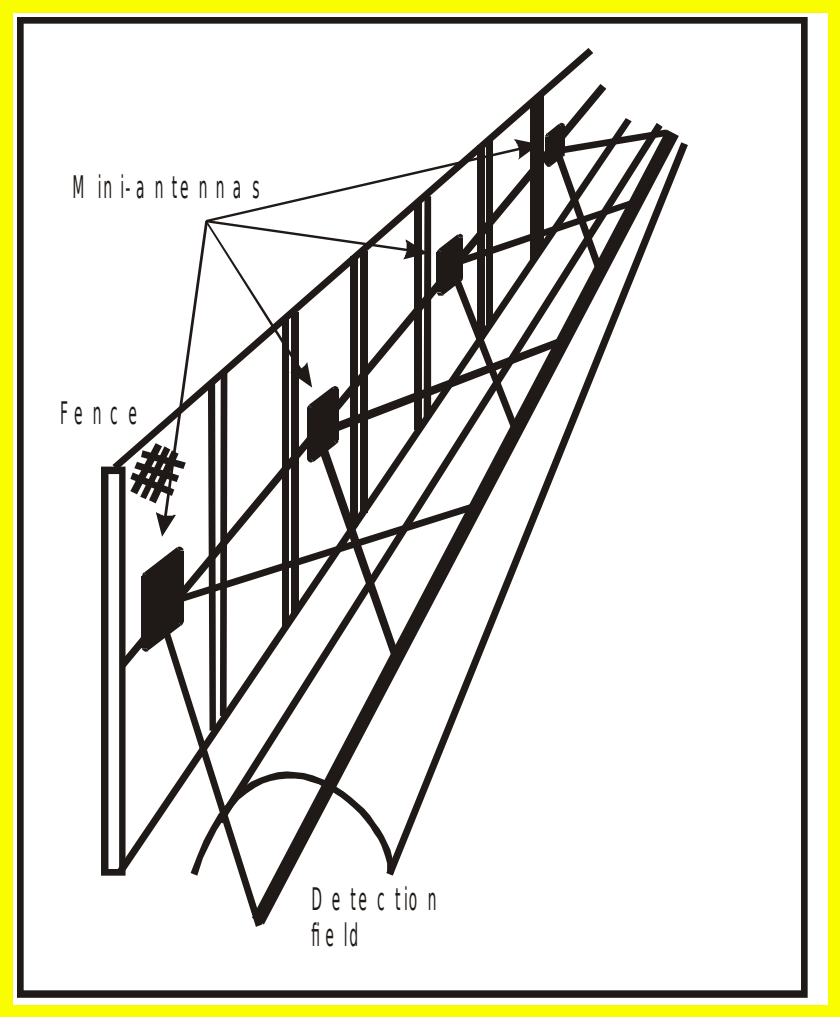
Ex 2: Transmitting into many miniature antennas

- Each area radiated by a miniature antenna forms a distinct zone.
- The miniature antennas are mounted on trees or fences.
- One dual frequency transmitter per antenna.
- 8 zones per system.
- Receive via one single sensor cable.
- No antenna



Ex 2a: Transmitter, mounted directly on chain link fence



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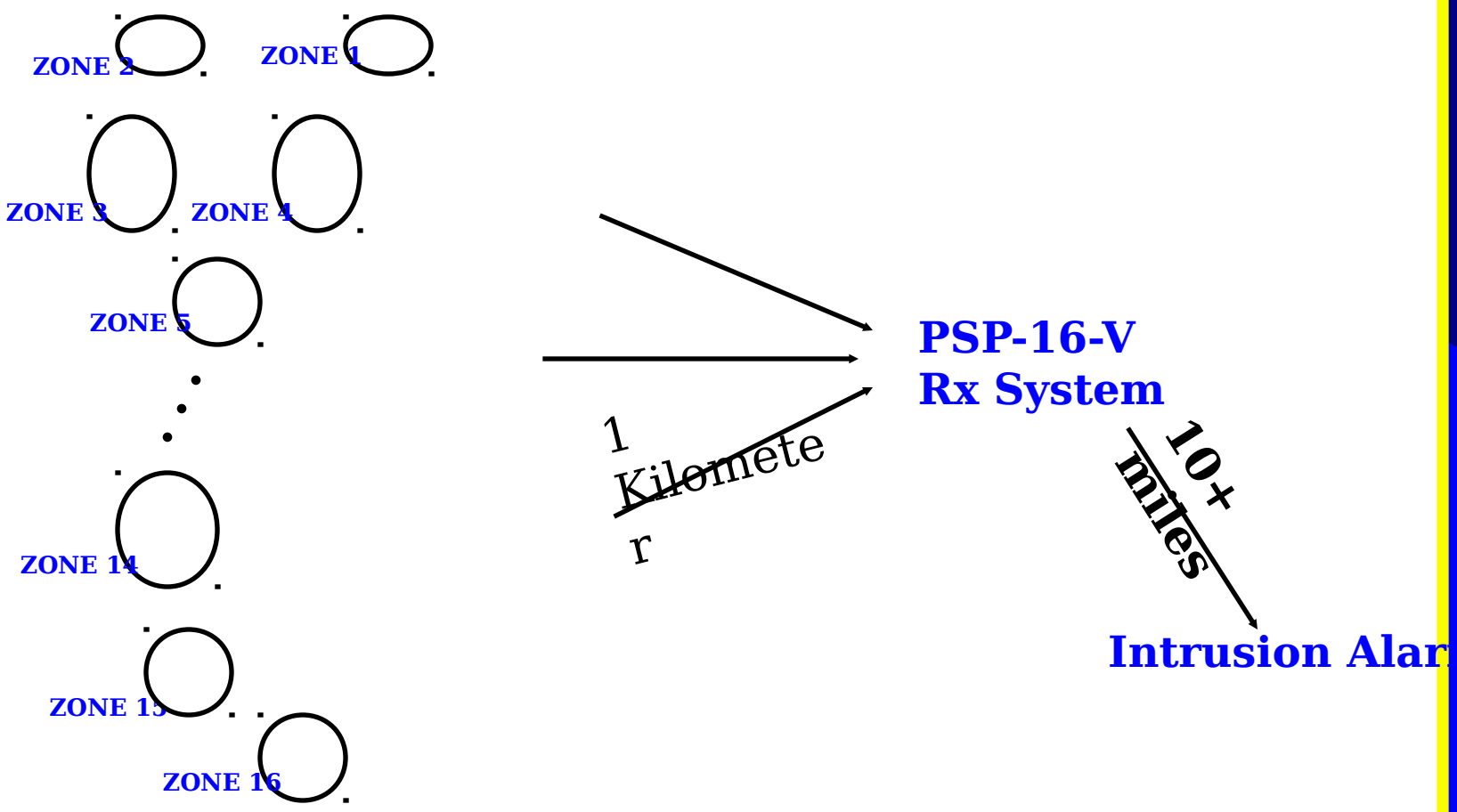
Ex 3: Transmitting into imitation objects



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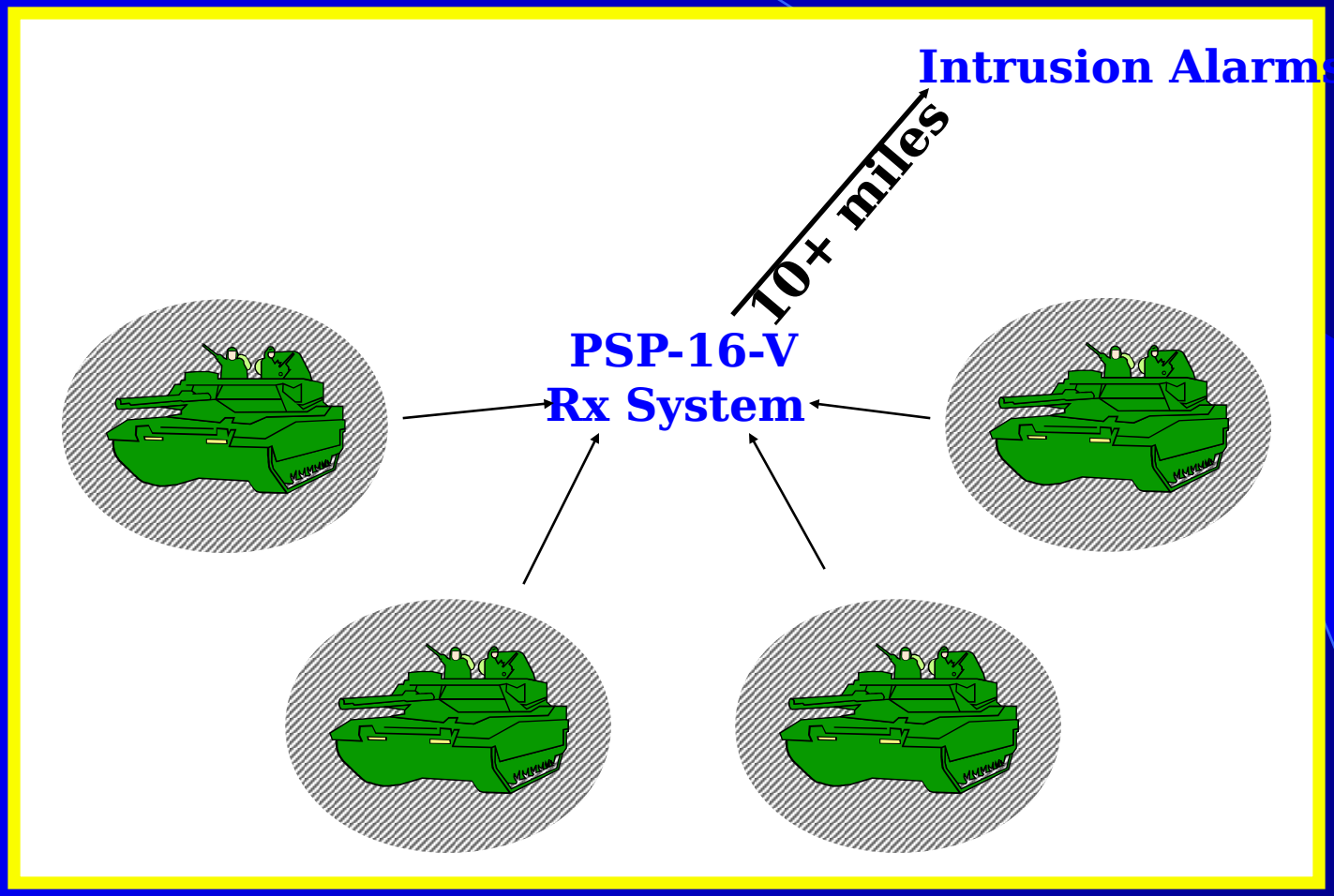
A potential replacement for “land mines” !!!

- Transmitters are hided into imitation natural object
- Detection width of 7ft (2 meters) diameter.
- Transmitters include a built-in wire type antenna.
- Multiple transmitters can be launched using conventional rocket gun.
- One remote receiver can be placed as far as 1 kilometer away using a high gain directional antenna.

Ex 4: Securing any metal platforms

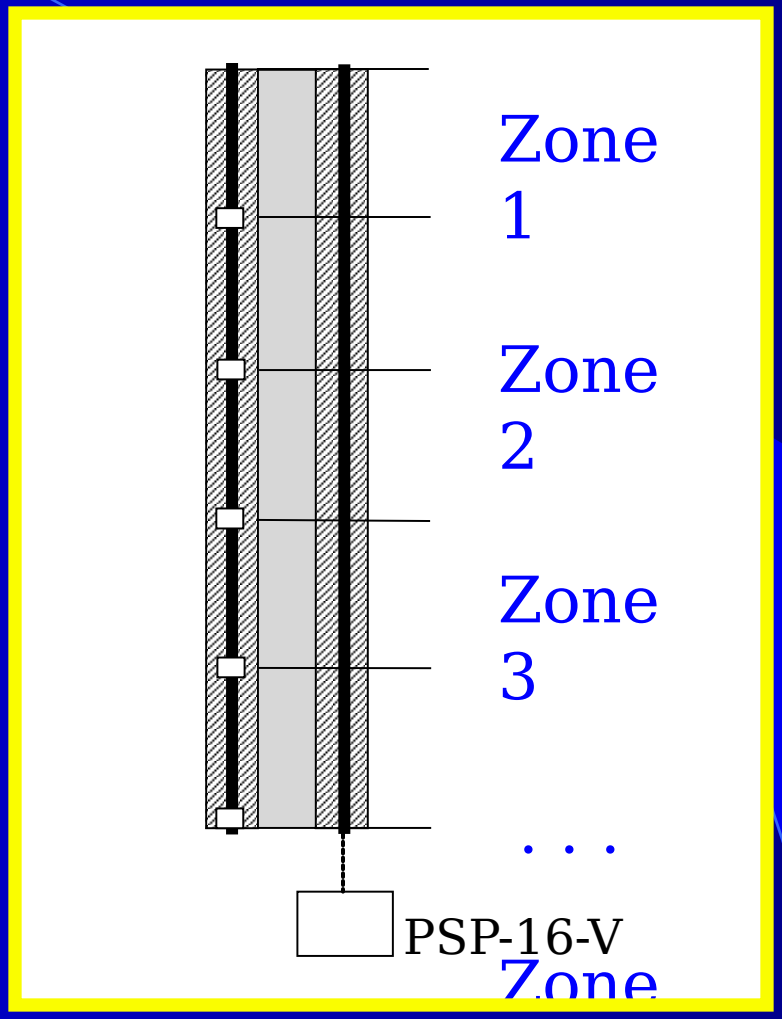
- Transmitter is using the metal platform ie: aircraft, tanks, radar, depot shelter, etc. as the transmitting antenna.
- A detection field of 3ft (1 m) surrounds the platform in 3D.
- Transmitter electronics are mounted inside the platform.
- 4 frequencies per transmitter, hence 4 secured metal platforms.
- One remote receiver placed as far as 2 kilometers away using a high gain directional antenna.

Ex 4a: Securing 4 stationary tanks



Ex 5: Transmitting into sections of sensor cable, receiving in a parallel sensor cable

- Each cable section form a distinct zone.
- One dual frequency transmitter per zone.
- 8 zones per system.
- Receive via one single parallel cable to form a double width zone.
- Typical cable spacing varies between 2m (6’) to 4m (14’) for short and long zones respectively.



Past / Current US Agencies Customer

- Sandia Laboratory, Tech-3 group, NM 1994
- INS, Federal Prison, Batavia, NY 1996
- FBOP, Rooftop of FDC-Miami, FL 1996
- Secret Service, Martha Vineyard VIP, MA 1997
- Secret Service, Secretary of State VIP 1997
- Kuwait Border trial, SAIC, MA 1997
- Hungarian US Army base, BLAHA, Fort Belvoir, VA 1998
- Pine-Bluff Arsenal, AK, Fort Belvoir, VA 1999
- Quantico Marine Corps, FBI Academy, VA 2000
- Smithsonian Museum, National Zoo, DC 2001
- Capitol Building, Capitol Police, DC 2001
- State Department, Construction Division, DC 2001
- State Department, Foreign Service, DC 2002

Conclusion

- Mature and proven technology
  - Over 1200 zones installed.
  - Installed in 16+ countries.
  - Applications are restricted to high level of security.
  - Zero calibration, ready to go RF sensor.
- High potential technology
  - Using the metal platform (fuselage) as antenna.
  - Using the wire distribution of a building as antenna.
  - Inexpensive, throw away, disposable sensor.

Thank you

have a nice day

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